

SEQUENCE LISTING

<110> Proteopharma ApS

<120> Apolipoprotein analogues

<130> P 459 PC00

<150> DK PA 2000 01682

<151> 2000-11-10

<150> DK PA 2001 00057

<151> 2001-01-15

<150> US 60/264,022

<151> 2001-01-26

<160> 14

<170> PatentIn version 3.1

<210> 1

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<212> PRT

<213> Homo sapiens

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Asp Glu Pro Pro Gln Ser Pro Trp Asp Arg Val Lys Asp Leu Ala Thr
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Val Tyr Val Asp Val Leu Lys Asp Ser Gly Arg Asp Tyr Val Ser Gln
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Phe Glu Gly Ser Ala Leu Gly Lys Gln Leu Asn Leu Lys Leu Leu Asp
35 40 45

Asn Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln Leu
50 55 60

Gly Pro Val Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr Glu
65 70 75 80

Gly Leu Arg Gln Glu Met Ser Lys Asp Leu Glu Glu Val Lys Ala Lys
85 90 95

Val Gln Pro Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu Met
100 105 110

Glu Leu Tyr Arg Gln Lys Val Glu Pro Leu Arg Ala Glu Leu Gln Glu
115 120 125

09087107-111304

Gly Ala Arg Gln Lys Leu His Glu Leu Gln Glu Lys Leu Ser Pro Leu
130 135 140

Gly Glu Glu Met Arg Asp Arg Ala Arg Ala His Val Asp Ala Leu Arg
145 150 155 160

Thr His Leu Ala Pro Tyr Ser Asp Glu Leu Arg Gln Arg Leu Ala Ala
165 170 175

Arg Leu Glu Ala Leu Lys Glu Asn Gly Gly Ala Arg Leu Ala Glu Tyr
180 185 190

His Ala Lys Ala Thr Glu His Leu Ser Thr Leu Ser Glu Lys Ala Lys
195 200 205

Pro Ala Leu Glu Asp Leu Arg Gln Gly Leu Leu Pro Val Leu Glu Ser
210 215 220

Phe Lys Val Ser Phe Leu Ser Ala Leu Glu Glu Tyr Thr Lys Lys Leu
225 230 235 240

Asn Thr Gln

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<223> Amino acid no 25 to 267 from human Apo A1

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Cys Asp Glu Pro Pro Gln Ser Pro Trp Asp Arg Val Lys Asp Leu Ala
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Thr Val Tyr Val Asp Val Leu Lys Asp Ser Gly Arg Asp Tyr Val Ser
20 25 30

Gln Phe Glu Gly Ser Ala Leu Gly Lys Gln Leu Asn Leu Lys Leu Leu

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Asp	Asn	Trp	Asp	Ser	Val	Thr	Ser	Thr	Phe	Ser	Lys	Leu	Arg	Glu	Gln				
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Leu	Gly	Pro	Val	Thr	Gln	Glu	Phe	Trp	Asp	Asn	Leu	Glu	Lys	Glu	Thr				
65					70					75					80				
Glu	Gly	Leu	Arg	Gln	Glu	Met	Ser	Lys	Asp	Leu	Glu	Glu	Val	Lys	Ala				
				85					90					95					
Lys	Val	Gln	Pro	Tyr	Leu	Asp	Asp	Phe	Gln	Lys	Lys	Trp	Gln	Glu	Glu				
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Met	Glu	Leu	Tyr	Arg	Gln	Lys	Val	Glu	Pro	Leu	Arg	Ala	Glu	Leu	Gln				
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Glu	Gly	Ala	Arg	Gln	Lys	Leu	His	Glu	Leu	Gln	Glu	Lys	Leu	Ser	Pro				
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Leu	Gly	Glu	Glu	Met	Arg	Asp	Arg	Ala	Arg	Ala	His	Val	Asp	Ala	Leu				
145					150					155					160				
Arg	Thr	His	Leu	Ala	Pro	Tyr	Ser	Asp	Glu	Leu	Arg	Gln	Arg	Leu	Ala				
				165					170					175					
Ala	Arg	Leu	Glu	Ala	Leu	Lys	Glu	Asn	Gly	Gly	Ala	Arg	Leu	Ala	Glu				
			180					185					190						
Tyr	His	Ala	Lys	Ala	Thr	Glu	His	Leu	Ser	Thr	Leu	Ser	Glu	Lys	Ala				
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Lys	Pro	Ala	Leu	Glu	Asp	Leu	Arg	Gln	Gly	Leu	Leu	Pro	Val	Leu	Glu				
		210				215					220								
Ser	Phe	Lys	Val	Ser	Phe	Leu	Ser	Ala	Leu	Glu	Glu	Tyr	Thr	Lys	Lys				
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Leu	Asn	Thr	Gln																

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 <223> Trimerisation module from tetranectin

<220>
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Ser Pro Gly Thr Glu Pro Pro Thr Gln Lys Pro Lys Lys Ile Val Asn
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Ala Lys Lys Asp Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys Ser
 20 25 30

Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln Gln
 35 40 45

Ala Leu Gln Thr Val Ser Leu Lys Gly Ser Asp Glu Pro Pro Gln Ser
 50 55 60

Pro Trp Asp Arg Val Lys Asp Leu Ala Thr Val Tyr Val Asp Val Leu
 65 70 75 80

Lys Asp Ser Gly Arg Asp Tyr Val Ser Gln Phe Glu Gly Ser Ala Leu
 85 90 95

Gly Lys Gln Leu Asn Leu Lys Leu Leu Asp Asn Trp Asp Ser Val Thr
 100 105 110

Ser Thr Phe Ser Lys Leu Arg Glu Gln Leu Gly Pro Val Thr Gln Glu
 115 120 125

Phe Trp Asp Asn Leu Glu Lys Glu Thr Glu Gly Leu Arg Gln Glu Met
 130 135 140

Ser Lys Asp Leu Glu Glu Val Lys Ala Lys Val Gln Pro Tyr Leu Asp
 145 150 155 160

Asp Phe Gln Lys Lys Trp Gln Glu Glu Met Glu Leu Tyr Arg Gln Lys
 165 170 175

Val Glu Pro Leu Arg Ala Glu Leu Gln Glu Gly Ala Arg Gln Lys Leu
 180 185 190

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His Glu Leu Gln Glu Lys Leu Ser Pro Leu Gly Glu Glu Met Arg Asp
195 200 205

Arg Ala Arg Ala His Val Asp Ala Leu Arg Thr His Leu Ala Pro Tyr
210 215 220

Ser Asp Glu Leu Arg Gln Arg Leu Ala Ala Arg Leu Glu Ala Leu Lys
225 230 235 240

Glu Asn Gly Gly Ala Arg Leu Ala Glu Tyr His Ala Lys Ala Thr Glu
245 250 255

His Leu Ser Thr Leu Ser Glu Lys Ala Lys Pro Ala Leu Glu Asp Leu
260 265 270

Arg Gln Gly Leu Leu Pro Val Leu Glu Ser Phe Lys Val Ser Phe Leu
275 280 285

Ser Ala Leu Glu Glu Tyr Thr Lys Lys Leu Asn Thr Gln
290 295 300

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<223> Amino acid 68-267 from human Apo A1

<400> 4

Ser Pro Gly Thr Glu Pro Pro Thr Gln Lys Pro Lys Lys Ile Val Asn
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Ala Lys Lys Asp Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys Ser
20 25 30

Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln Gln
35 40 45

Ala Leu Gln Thr Val Ser Leu Lys Gly Ser Leu Lys Leu Leu Asp Asn
50 55 60

Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln Leu Gly
65 70 75 80

Pro Val Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr Glu Gly
85 90 95

Leu Arg Gln Glu Met Ser Lys Asp Leu Glu Glu Val Lys Ala Lys Val
100 105 110

Gln Pro Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu Met Glu
115 120 125

Leu Tyr Arg Gln Lys Val Glu Pro Leu Arg Ala Glu Leu Gln Glu Gly
130 135 140

Ala Arg Gln Lys Leu His Glu Leu Gln Glu Lys Leu Ser Pro Leu Gly
145 150 155 160

Glu Glu Met Arg Asp Arg Ala Arg Ala His Val Asp Ala Leu Arg Thr
165 170 175

His Leu Ala Pro Tyr Ser Asp Glu Leu Arg Gln Arg Leu Ala Ala Arg
180 185 190

Leu Glu Ala Leu Lys Glu Asn Gly Gly Ala Arg Leu Ala Glu Tyr His
195 200 205

Ala Lys Ala Thr Glu His Leu Ser Thr Leu Ser Glu Lys Ala Lys Pro
210 215 220

Ala Leu Glu Asp Leu Arg Gln Gly Leu Leu Pro Val Leu Glu Ser Phe
225 230 235 240

Lys Val Ser Phe Leu Ser Ala Leu Glu Glu Tyr Thr Lys Lys Leu Asn
245 250 255

Thr Gln

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<213> Homo sapiens

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Ser Pro Gly Thr Glu Pro Pro Thr Gln Lys Pro Lys Ala Ile Val Asn
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Ala Lys Ala Asp Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys Ser
20 25 30

Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln Gln
35 40 45

Ala Leu Gln Thr Val Ser Leu Lys Gly Ser Asp Glu Pro Pro Gln Ser
50 55 60

Pro Trp Asp Arg Val Lys Asp Leu Ala Thr Val Tyr Val Asp Val Leu
65 70 75 80

Lys Asp Ser Gly Arg Asp Tyr Val Ser Gln Phe Glu Gly Ser Ala Leu
85 90 95

Gly Lys Gln Leu Asn Leu Lys Leu Leu Asp Asn Trp Asp Ser Val Thr
100 105 110

Ser Thr Phe Ser Lys Leu Arg Glu Gln Leu Gly Pro Val Thr Gln Glu
115 120 125

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Phe Trp Asp Asn Leu Glu Lys Glu Thr Glu Gly Leu Arg Gln Glu Met
130 135 140

Ser Lys Asp Leu Glu Glu Val Lys Ala Lys Val Gln Pro Tyr Leu Asp
145 150 155 160

Asp Phe Gln Lys Lys Trp Gln Glu Glu Met Glu Leu Tyr Arg Gln Lys
165 170 175

Val Glu Pro Leu Arg Ala Glu Leu Gln Glu Gly Ala Arg Gln Lys Leu
180 185 190

His Glu Leu Gln Glu Lys Leu Ser Pro Leu Gly Glu Glu Met Arg Asp
195 200 205

Arg Ala Arg Ala His Val Asp Ala Leu Arg Thr His Leu Ala Pro Tyr
210 215 220

Ser Asp Glu Leu Arg Gln Arg Leu Ala Ala Arg Leu Glu Ala Leu Lys
225 230 235 240

Glu Asn Gly Gly Ala Arg Leu Ala Glu Tyr His Ala Lys Ala Thr Glu
245 250 255

His Leu Ser Thr Leu Ser Glu Lys Ala Lys Pro Ala Leu Glu Asp Leu
260 265 270

Arg Gln Gly Leu Leu Pro Val Leu Glu Ser Phe Lys Val Ser Phe Leu
275 280 285

Ser Ala Leu Glu Glu Tyr Thr Lys Lys Leu Asn Thr Gln
290 295 300

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<223> Trimerisation module from tetranectin

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<223> Linker

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 <222> (62)..(304)
 <223> Mature Apo-AI

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Ser Pro Gly Thr Glu Pro Pro Thr Gln Lys Pro Lys Lys Ile Val Asn
 1 5 10 15

Ala Lys Lys Asp Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys Ser
 20 25 30

Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln Gln
 35 40 45

Ala Leu Gln Thr Val Ser Leu Lys Gly Ser Ser Gly His Asp Glu Pro
 50 55 60

Pro Gln Ser Pro Trp Asp Arg Val Lys Asp Leu Ala Thr Val Tyr Val
 65 70 75 80

Asp Val Leu Lys Asp Ser Gly Arg Asp Tyr Val Ser Gln Phe Glu Gly
 85 90 95

Ser Ala Leu Gly Lys Gln Leu Asn Leu Lys Leu Leu Asp Asn Trp Asp
 100 105 110

Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln Leu Gly Pro Val
 115 120 125

Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr Glu Gly Leu Arg
 130 135 140

Gln Glu Met Ser Lys Asp Leu Glu Glu Val Lys Ala Lys Val Gln Pro
 145 150 155 160

Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu Met Glu Leu Tyr
 165 170 175

Arg Gln Lys Val Glu Pro Leu Arg Ala Glu Leu Gln Glu Gly Ala Arg
 180 185 190

Gln Lys Leu His Glu Leu Gln Glu Lys Leu Ser Pro Leu Gly Glu Glu
 195 200 205

Met Arg Asp Arg Ala Arg Ala His Val Asp Ala Leu Arg Thr His Leu
210 215 220

Ala Pro Tyr Ser Asp Glu Leu Arg Gln Arg Leu Ala Ala Arg Leu Glu
225 230 235 240

Ala Leu Lys Glu Asn Gly Gly Ala Arg Leu Ala Glu Tyr His Ala Lys
245 250 255

Ala Thr Glu His Leu Ser Thr Leu Ser Glu Lys Ala Lys Pro Ala Leu
260 265 270

Glu Asp Leu Arg Gln / Gly Leu Leu Pro Val Leu Glu Ser Phe Lys Val
275 280 285

Ser Phe Leu Ser Ala Leu Glu Glu Tyr Thr Lys Lys Leu Asn Thr Gln
290 295 300

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<223> Fibronectin based linker
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<223> Mature Apo-AI
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Ser Pro Gly Thr Glu Pro Pro Thr Gln Lys Pro Lys Lys Ile Val Asn
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Ala Lys Lys Asp Val Val Asn Thr Lys Met Phe Glu ~~Glu~~ Leu Lys Ser
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Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys / Glu Gln Gln
35 40 45

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Ala Leu Gln Thr Val Ser Leu Lys Gly Thr Ser Gly Gln Asp Glu Pro
50 55 60

Pro Gln Ser Pro Trp Asp Arg Val Lys Asp Leu Ala Thr Val Tyr Val
65 70 75 80

Asp Val Leu Lys Asp Ser Gly Arg Asp Tyr Val Ser Gln Phe Glu Gly
85 90 95

Ser Ala Leu Gly Lys Gln Leu Asn Leu Lys Leu Leu Asp Asn Trp Asp
100 105 110

Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln Leu Gly Pro Val
115 120 125

Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr Glu Gly Leu Arg
130 135 140

Gln Glu Met Ser Lys Asp Leu Glu Glu Val Lys Ala Lys Val Gln Pro
145 150 155 160

Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu Met Glu Leu Tyr
165 170 175

Arg Gln Lys Val Glu Pro Leu Arg Ala Glu Leu Gln Glu Gly Ala Arg
180 185 190

Gln Lys Leu His Glu Leu Gln Glu Lys Leu Ser Pro Leu Gly Glu Glu
195 200 205

Met Arg Asp Arg Ala Arg Ala His Val Asp Ala Leu Arg Thr His Leu
210 215 220

Ala Pro Tyr Ser Asp Glu Leu Arg Gln Arg Leu Ala Ala Arg Leu Glu
225 230 235 240

Ala Leu Lys Glu Asn Gly Gly Ala Arg Leu Ala Glu Tyr His Ala Lys
245 250 255

Ala Thr Glu His Leu Ser Thr Leu Ser Glu Lys Ala Lys Pro Ala Leu
260 265 270

Glu Asp Leu Arg Gln Gly Leu Leu Pro Val Leu Glu Ser Phe Lys Val
275 280 285

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Ser Phe Leu Ser Ala Leu Glu Glu Tyr Thr Lys Lys Leu Asn Thr Gln
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Ser Pro Gly Thr Glu Pro Pro Thr Gln Lys Pro Lys Ala Ile Val Asn
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Ala Lys Ala Asp Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys Ser
20 25 30

Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln Gln
35 40 45

Ala Leu Gln Thr Val Ser Leu Lys Gly Thr Ser Gly Gln Asp Glu Pro
50 55 60

Pro Gln Ser Pro Trp Asp Arg Val Lys Asp Leu Ala Thr Val Tyr Val

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65					70					75					80
Asp	Val	Leu	Lys	Asp	Ser	Gly	Arg	Asp	Tyr	Val	Ser	Gln	Phe	Glu	Gly
				85					90					95	
Ser	Ala	Leu	Gly	Lys	Gln	Leu	Asn	Leu	Lys	Leu	Leu	Asp	Asn	Trp	Asp
			100					105					110		
Ser	Val	Thr	Ser	Thr	Phe	Ser	Lys	Leu	Arg	Glu	Gln	Leu	Gly	Pro	Val
		115					120					125			
Thr	Gln	Glu	Phe	Trp	Asp	Asn	Leu	Glu	Lys	Glu	Thr	Glu	Gly	Leu	Arg
		130				135						140			
Gln	Glu	Met	Ser	Lys	Asp	Leu	Glu	Glu	Val	Lys	Ala	Lys	Val	Gln	Pro
145					150					155					160
Tyr	Leu	Asp	Asp	Phe	Gln	Lys	Lys	Trp	Gln	Glu	Glu	Met	Glu	Leu	Tyr
				165					170					175	
Arg	Gln	Lys	Val	Glu	Pro	Leu	Arg	Ala	Glu	Leu	Gln	Glu	Gly	Ala	Arg
			180					185					190		
Gln	Lys	Leu	His	Glu	Leu	Gln	Glu	Lys	Leu	Ser	Pro	Leu	Gly	Glu	Glu
		195					200					205			
Met	Arg	Asp	Arg	Ala	Arg	Ala	His	Val	Asp	Ala	Leu	Arg	Thr	His	Leu
		210				215					220				
Ala	Pro	Tyr	Ser	Asp	Glu	Leu	Arg	Gln	Arg	Leu	Ala	Ala	Arg	Leu	Glu
225					230					235					240
Ala	Leu	Lys	Glu	Asn	Gly	Gly	Ala	Arg	Leu	Ala	Glu	Tyr	His	Ala	Lys
				245					250					255	
Ala	Thr	Glu	His	Leu	Ser	Thr	Leu	Ser	Glu	Lys	Ala	Lys	Pro	Ala	Leu
			260					265					270		
Glu	Asp	Leu	Arg	Gln	Gly	Leu	Leu	Pro	Val	Leu	Glu	Ser	Phe	Lys	Val
		275					280					285			
Ser	Phe	Leu	Ser	Ala	Leu	Glu	Glu	Tyr	Thr	Lys	Lys	Leu	Asn	Thr	Gln
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Ser Pro Gly Thr Glu Pro Pro Thr Gln Lys Pro Lys Lys Ile Val Asn
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Ala Lys Lys Asp Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys Ser
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Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln Gln
35          40          45

Ala Leu Gln Thr Val Ser Leu Lys Gly Ser Lys Val His Met Lys Asp
50          55          60

Glu Pro Pro Gln Ser Pro Trp Asp Arg Val Lys Asp Leu Ala Thr Val
65          70          75          80

Tyr Val Asp Val Leu Lys Asp Ser Gly Arg Asp Tyr Val Ser Gln Phe
85          90          95

Glu Gly Ser Ala Leu Gly Lys Gln Leu Asn Leu Lys Leu Leu Asp Asn
100         105         110

Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln Leu Gly
115         120         125

Pro Val Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr Glu Gly
130         135         140

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Leu Arg Gln Glu Met Ser Lys Asp Leu Glu Glu Val Lys Ala Lys Val
145 150 155 160

Gln Pro Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu Met Glu
165 170 175

Leu Tyr Arg Gln Lys Val Glu Pro Leu Arg Ala Glu Leu Gln Glu Gly
180 185 190

Ala Arg Gln Lys Leu His Glu Leu Gln Glu Lys Leu Ser Pro Leu Gly
195 200 205

Glu Glu Met Arg Asp Arg Ala Arg Ala His Val Asp Ala Leu Arg Thr
210 215 220

His Leu Ala Pro Tyr Ser Asp Glu Leu Arg Gln Arg Leu Ala Ala Arg
225 230 235 240

Leu Glu Ala Leu Lys Glu Asn Gly Gly Ala Arg Leu Ala Glu Tyr His
245 250 255

Ala Lys Ala Thr Glu His Leu Ser Thr Leu Ser Glu Lys Ala Lys Pro
260 265 270

Ala Leu Glu Asp Leu Arg Gln Gly Leu Leu Pro Val Leu Glu Ser Phe
275 280 285

Lys Val Ser Phe Leu Ser Ala Leu Glu Glu Tyr Thr Lys Lys Leu Asn
290 295 300

Thr Gln
305

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Ser Pro Gly Thr Glu Pro Pro Thr Gln Lys Pro Lys Lys Ile Val Asn
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Ala Lys Lys Asp Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys Ser
 20 25 30

Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln Gln
 35 40 45

Ala Leu Gln Thr Val Ser Leu Lys Gly Thr Lys Val His Met Lys Asp
 50 55 60

Glu Pro Pro Gln Ser Pro Trp Asp Arg Val Lys Asp Leu Ala Thr Val
 65 70 75 80

Tyr Val Asp Val Leu Lys Asp Ser Gly Arg Asp Tyr Val Ser Gln Phe
 85 90 95

Glu Gly Ser Ala Leu Gly Lys Gln Leu Asn Leu Lys Leu Leu Asp Asn
 100 105 110

Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln Leu Gly
 115 120 125

Pro Val Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr Glu Gly
 130 135 140

Leu Arg Gln Glu Met Ser Lys Asp Leu Glu Glu Val Lys Ala Lys Val
 145 150 155 160

Gln Pro Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu Met Glu
 165 170 175

Leu Tyr Arg Gln Lys Val Glu Pro Leu Arg Ala Glu Leu Gln Glu Gly
 180 185 190

Ala Arg Gln Lys Leu His Glu Leu Gln Glu Lys Leu Ser Pro Leu Gly
 195 200 205

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Glu Glu Met Arg Asp Arg Ala Arg Ala His Val Asp Ala Leu Arg Thr
210 215 220

His Leu Ala Pro Tyr Ser Asp Glu Leu Arg Gln Arg Leu Ala Ala Arg
225 230 235 240

Leu Glu Ala Leu Lys Glu Asn Gly Gly Ala Arg Leu Ala Glu Tyr His
245 250 255

Ala Lys Ala Thr Glu His Leu Ser Thr Leu Ser Glu Lys Ala Lys Pro
260 265 270

Ala Leu Glu Asp Leu Arg Gln Gly Leu Leu Pro Val Leu Glu Ser Phe
275 280 285

Lys Val Ser Phe Leu Ser Ala Leu Glu Glu Tyr Thr Lys Lys Leu Asn
290 295 300

Thr Gln
305

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Ser Pro Gly Thr Glu Pro Pro Thr Gln Lys Pro Lys Ala Ile Val Asn
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Ala Lys Ala Asp Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys Ser
20 25 30

Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln Gln
35 40 45

Ala Leu Gln Thr Val Ser Leu Lys Gly Thr Lys Val His Met Lys Asp
50 55 60

Glu Pro Pro Gln Ser Pro Trp Asp Arg Val Lys Asp Leu Ala Thr Val
65 70 75 80

Tyr Val Asp Val Leu Lys Asp Ser Gly Arg Asp Tyr Val Ser Gln Phe
85 90 95

Glu Gly Ser Ala Leu Gly Lys Gln Leu Asn Leu Lys Leu Leu Asp Asn
100 105 110

Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln Leu Gly
115 120 125

Pro Val Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr Glu Gly
130 135 140

Leu Arg Gln Glu Met Ser Lys Asp Leu Glu Glu Val Lys Ala Lys Val
145 150 155 160

Gln Pro Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu Met Glu
165 170 175

Leu Tyr Arg Gln Lys Val Glu Pro Leu Arg Ala Glu Leu Gln Glu Gly
180 185 190

Ala Arg Gln Lys Leu His Glu Leu Gln Glu Lys Leu Ser Pro Leu Gly
195 200 205

Glu Glu Met Arg Asp Arg Ala Arg Ala His Val Asp Ala Leu Arg Thr
210 215 220

His Leu Ala Pro Tyr Ser Asp Glu Leu Arg Gln Arg Leu Ala Ala Arg
225 230 235 240

Leu Glu Ala Leu Lys Glu Asn Gly Gly Ala Arg Leu Ala Glu Tyr His
245 250 255

Ala Lys Ala Thr Glu His Leu Ser Thr Leu Ser Glu Lys Ala Lys Pro
260 265 270

Ala Leu Glu Asp Leu Arg Gln Gly Leu Leu Pro Val Leu Glu Ser Phe
275 280 285

Lys Val Ser Phe Leu Ser Ala Leu Glu Glu Tyr Thr Lys Lys Leu Asn
290 295 300

Thr Gln
305

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<310> WO 98/56906
<311> 1998-06-11
<312> 1998-12-17
<313> (1)..(51)

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Glu Pro Pro Thr Gln Lys Pro Lys Lys Ile Val Asn Ala Lys Lys Asp
1 5 10 15

Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys Ser Arg Leu Asp Thr
20 25 30

Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln Gln Ala Leu Gln Thr
35 40 45

Val Cys Leu
50

<210> 13
<211> 58
<212> PRT

<213> Homo sapiens
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 <222> (1)..(4)
 <223> Linker sequence

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 <222> (5)..(56)
 <223> Modified TTSE

<220>
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 <222> (57)..(58)
 <223> Linker

<400> 13

Ser Pro Gly Thr Glu Pro Pro Thr Gln Lys Pro Lys Lys Ile Val Asn
 1 5 10 15

Ala Lys Lys Asp Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys Ser
 20 25 30

Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln Gln
 35 40 45

Ala Leu Gln Thr Val Ser Leu Lys Gly Ser
 50 55

<210> 14
 <211> 329
 <212> PRT
 <213> Homo sapiens

<220>
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 <222> (1)..(86)
 <223> Hp(alpha) residues

<220>
 <221> MISC_FEATURE
 <222> (87)..(329)
 <223> Apo A-I

<400> 14

Gly Val Asp Ser Gly Asn Asp Val Thr Asp Ile Ala Asp Asp Gly Cys
 1 5 10 15

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Pro	Lys	Pro	Pro	Glu	Ile	Ala	His	Gly	Tyr	Val	Glu	His	Ser	Val	Arg	20	25	30	
Tyr	Gln	Cys	Lys	Asn	Tyr	Tyr	Lys	Leu	Arg	Thr	Glu	Gly	Asp	Gly	Val	35	40	45	
Tyr	Thr	Leu	Asn	Asn	Glu	Lys	Gln	Trp	Ile	Asn	Lys	Ala	Val	Gly	Asp	50	55	60	
Lys	Leu	Pro	Glu	Cys	Glu	Ala	Val	Ala	Gly	Lys	Pro	Lys	Asn	Pro	Ala	65	70	75	80
Asn	Pro	Val	Gln	Arg	Ser	Asp	Glu	Pro	Pro	Gln	Ser	Pro	Trp	Asp	Arg	85	90	95	
Val	Lys	Asp	Leu	Ala	Thr	Val	Tyr	Val	Asp	Val	Leu	Lys	Asp	Ser	Gly	100	105	110	
Arg	Asp	Tyr	Val	Ser	Gln	Phe	Glu	Gly	Ser	Ala	Leu	Gly	Lys	Gln	Leu	115	120	125	
Asn	Leu	Lys	Leu	Leu	Asp	Asn	Trp	Asp	Ser	Val	Thr	Ser	Thr	Phe	Ser	130	135	140	
Lys	Leu	Arg	Glu	Gln	Leu	Gly	Pro	Val	Thr	Gln	Glu	Phe	Trp	Asp	Asn	145	150	155	160
Leu	Glu	Lys	Glu	Thr	Glu	Gly	Leu	Arg	Gln	Glu	Met	Ser	Lys	Asp	Leu	165	170	175	
Glu	Glu	Val	Lys	Ala	Lys	Val	Gln	Pro	Tyr	Leu	Asp	Asp	Phe	Gln	Lys	180	185	190	
Lys	Trp	Gln	Glu	Glu	Met	Glu	Leu	Tyr	Arg	Gln	Lys	Val	Glu	Pro	Leu	195	200	205	
Arg	Ala	Glu	Leu	Gln	Glu	Gly	Ala	Arg	Gln	Lys	Leu	His	Glu	Leu	Gln	210	215	220	
Glu	Lys	Leu	Ser	Pro	Leu	Gly	Glu	Glu	Met	Arg	Asp	Arg	Ala	Arg	Ala	225	230	235	240
His	Val	Asp	Ala	Leu	Arg	Thr	His	Leu	Ala	Pro	Tyr	Ser	Asp	Glu	Leu	245	250	255	

Arg Gln Arg Leu Ala Ala Arg Leu Glu Ala Leu Lys Glu Asn Gly Gly
260 265 270

Ala Arg Leu Ala Glu Tyr His Ala Lys Ala Thr Glu His Leu Ser Thr
275 280 285

Leu Ser Glu Lys Ala Lys Pro Ala Leu Glu Asp Leu Arg Gln Gly Leu
290 295 300

Leu Pro Val Leu Glu Ser Phe Lys Val Ser Phe Leu Ser Ala Leu Glu
305 310 315 320

Glu Tyr Thr Lys Lys Leu Asn Thr Gln
325

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